

WHAT IS CLAIMED IS:

1. A frictional limited slip differential comprising:

a body section (12) having a fixed cover (11),

5 a first side pinion gear (14) arranged inside of said body section (12) and connected with a driving shaft of a vehicle ,

a second side pinion gear (13) rotatably connected with a driving shaft of vehicle opposite to said first side pinion gear (14),

10 a pair of differential pinion gears (15, 16) each of which is rotated in engagement with said first side pinion gear (14) and second side pinion gear (13),

friction plates arranged at rear sides of said first side pinion gear (14) and second side pinion gear (13), and

15 a pressure generating device (20) constructed such that its cover gear (22) and piston gear (25) engage with said second side pinion gear (13) and first side pinion gear (14), respectively, and can be displaced away from each other in a longitudinal direction of said device.

2. A frictional limited slip differential comprising:

a body section (12) having a fixed cover (11),

20 a first side pinion gear (14) arranged inside of said body section (12) and connected with a driving shaft of a vehicle,

a second side pinion gear (13) rotatably connected with a driving shaft of a vehicle opposite to said first side pinion gear (14),

a pair of differential pinion gears (15, 16) each of which is rotated in

engagement with said first side pinion gear (14) and second side pinion gear (13),
friction plates arranged at rear sides of said differential pinion gears (15, 16),
and

a pressure generating device (20) constructed such that its cover gear (22)
and piston gear (25) engage with said differential pinion gears (15, 16), respectively,
and can be displaced away from each other in a longitudinal direction of said device.

3. A frictional limited slip differential according to claim 1 or 2, wherein said
pressure generating device (20) comprising:

a body cylinder (24) secured to and rotated together with a cover gear (22)
as a unit, and at lower part thereof incorporating a piston gear (25) which can be
rotated in a direction opposite to said cover gear,

a trocoid gear pump (23) arranged inside of said body cylinder (24) and
generating pressure while rotating along with said piston gear (25), and

discharging channels (45) delivering said pressure generated by the rotation
of said trocoid gear pump (23) to said piston gear (25).

4. A frictional limited slip differential according to claim 3,

wherein a flow passage (17) in said cover gear (22) leading to the inside of
said body cylinder (24), and a bellow (21) formed inside said cover gear such that
the amount of oil in said bellow is adjusted through said flow passage (17) when
pressure is generated in said body cylinder (24).